

THE ROLE OF SCIENTIFIC EXPERTS IN ASSESSING UNCERTAIN RISKS

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Background and Aims Environmental health problems are often complex, large-scale and uncertain. Examples of such “systemic risks” are electromagnetic fields (EMF) and ultra fine particles. The uncertainties inherent in systemic risks provide leeway for different appraisal of risks. This raises the question how experts interpret uncertainty and how this affects their policy advice. Research on different expert perspectives has remained largely theoretical. We present a preliminary study which explores whether specific expert roles exist in practice and how these compare to ideal typical ones proposed by Weiss and by Pielke. We explored this for the areas of EMF and particulate matter.

Methods Q methodology was used to evaluate two typologies on different expert roles. Data collection was conducted with the web-based program FlashQ, among scientific experts in the Netherlands. For EMF, 26 experts participated, and for particulate matter 21 experts. Experts ranked 48 statements. Responses were analyzed using factor analysis in the PQMethod program.

Results The experts perceive EMF as a relatively certain risk and particulate matter as an uncertain risk. Three different expert roles are tentatively identified for each sub-domain. For EMF these roles are: The Autonomous Scientist, The Realist and The *Laissez-faire* Expert. For particulate matter, these are: The Engaged Expert, The Instrumental Expert and The Deliberator. These roles are considered hybrids of the expert roles by Pielke and Weiss.

Conclusions The preliminary results of this study indicate that different expert roles exist among scientists who provide policy advice on environmental health issues. These results will be further elaborated in order to identify and deal with the effects of the personal attitudes of scientists, policy makers and other stakeholders on the way they, respectively, advise on, develop and act on policy interventions.